Division of Science Resources Studies

DATA BRIEF

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Federal Academic Science and Engineering Obligations Decreased Slightly in FY 1996

by Richard J. Bennof

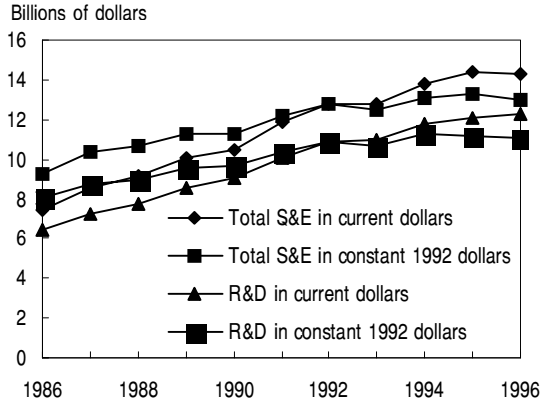
When adjusted for inflation, Federal academic S&E obligations decreased in each of the six funding categories in FY 1996.

In fiscal year (FY) 1996, Federal agencies obligated $14.3 billion for academic science and engineering (S&E), $23 million or two-tenths of one percent below FY 1995 levels. This is only the fourth time since the inception of this survey series in 1963 that current dollar obligations had fallen. After adjusting for inflation, the decrease exceeded 2 percent. This information is based on the most recent data from the National Science Foundation's (NSF's) annual Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions.

Categories of Support

The Federal Government provides academic S&E funds in the following six categories: (1) research and development (R&D); (2) fellowships, traineeships, and training grants (FTTG); (3) R&D plant; (4) facilities and equipment for instruction; (5) general support for S&E; and (6) other S&E activities. R&D programs consistently have dominated the academic S&E total, ranging from 84- 87 percent of total since FY 1986 (chart 1).

Chart 1. Federal science and engineering (S&E) and S&E research and development (R&D) obligations: FYs 1986-96



SOURCE: NSF/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY1996

The $12.2 billion R&D total in FY 1996 represented a 1-percent current-dollar increase (and a 1-percent decrease in 1992 dollars) from the prior year (table 1). Department of Health and Human Services (HHS) programs accounted for 56 percent ($6.8 billion) of all FY 1996 Federal academic R&D obligations. Each of the other five categories showed decreased inflation-adjusted obligations in FY 1996, with only funds for "other S&E activities" increasing in current terms (by 1 percent to $959 million). This category includes all academic S&E obligations that cannot be assigned to one of the other five categories. Examples include activities in support of technical conferences, teacher institutes, and programs geared to increase the scientific knowledge of precollege and undergraduate students.

Table 1. Federal academic S&E support, by type of activity: Fiscal years 1995-96

Type of Activity	(Millions of dollars)		(Percentage change)	
	FY 1995	FY 1996	Current dollars	1992 dollars
S&E total	14,361	14,338	-0.2	-2.4
R&D	12,081	12,236	1.3	-1.0
R&D plant	341	248	-27.3	-28.9
Facilities for instruction	52	49	-5.0	-7.1
Fellowships, traineeships, and training grants	674	636	-5.7	-7.8
General support for S&E	264	210	-20.5	-22.3
Other S&E	949	959	1.1	-1.2

NOTE: Percentages are based on unrounded numbers.
SOURCE: NSF/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 1996.

R&D plant support was down 27 percent in current dollars to $248 million, mostly as a result of decreased NSF funding. FTTG funds fell by 6 percent, to $636 million, largely because of a decline in support from the National Aeronautics and Space Administration

Electronic Dissemination

SRS data are available through the World Wide Web (http://www.nsf.gov/sbe/srs/stats.htm). For more information about obtaining reports, contact pubs@nsf.gov or call (301) 947-2722. For NSF's Telephonic Device for the Deaf, dial (703) 306-0090.

(NASA) and the Department of Education (ED). Funds for facilities and equipment for instruction were down 5 percent, to $49 million. Obligations for general support programs totaled $210 million, a 21-percent decrease largely stemming from reduced funding reported by the Agency for International Development (AID). General support for S&E includes programs that support nonspecific or generalized purposes related to scientific research and education. Such projects include, for example, funding provided without any specification of purpose other than that the funds be used for scientific projects and support for activities within a specified discipline.

Agency Sources

HHS accounted for just over one-half of all Federal FY 1996 academic S&E obligations. When combined with support from NSF and the Department of Defense (DOD), these three agencies were responsible for nearly four-fifths of the academic S&E total. Only HHS, though, reported real S&E growth (2 percent); both NSF and DOD reported decreased obligation levels in both current and real terms. The Department of Agriculture (USDA), NASA, and the Department of Energy (DOE) were responsible for about four-fifths of the remaining academic S&E total. Of those three agencies, only DOE showed a current-dollar increase; in 1992 dollars, its funds were up 1 percent.

Together, HHS, NSF and DOD accounted for almost four-fifths of the academic S&E total.

University Shares

Johns Hopkins University (including its Applied Physics Laboratory) was the leading academic recipient of FY 1996 Federal S&E support ($729 million), with DOD and HHS the major contributors at 87 percent (table 2). More than 5 of every 6 dollars in S&E support to Johns Hopkins University were for R&D programs.

The top 20 universities of the 1,122 receiving funds, ranked by Federal S&E obligations, accounted for 36 percent of the academic S&E total. Eighteen of the top 20 recipients in FY 1996 were among the leading 20 universities in FY 1995. The new entrants were Washington University (sixteenth after being twenty-first the year before) and the University of North Carolina at Chapel Hill (twentieth, up from twenty-second in FY 1995). These 20 leading university recipients received 42 percent of DOD's academic S&E support in FY 1996, as well as 40 percent of HHS' academic S&E total. A smaller, 32-percent share of NSF's academic S&E support went to those top 20 recipient universities.

User Notes

The Federal S&E support data presented in this Data Brief were obtained from 18 Federal agencies that provide virtually all academic R&D support and that participated in the FY 1996 Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions. The annual survey also collects data on Federal S&E obligations by funding category, type of institution, institutional ranking, and geographic distribution.

NSF makes available computer-generated Institutional Profiles for individual doctorate-granting institutions and schools with S&E departments that grant master's degrees. Institutional Profiles contain data from this survey and from NSF's other two academic S&E surveys: the Survey of Research and Development Expenditures at Universities and Colleges and the Survey of Graduate Science and Engineering Students and Postdoctorates. Data from these three surveys also are available via the World Wide Web (see "Electronic Dissemination," p.1) and the Computer-Aided Science Policy Analysis and Research (WebCASPAR) database system, a user-friendly Web tool for retrieval and analyses of statistical data on academic S&E resources.

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Table 2. Federal academic S&E support to the top 20 universities: FY 1996
(Millions of dollars)

Rank	Institution	Total S&E	USDA	DOD	DOE	HHS	NASA	NSF	Other 2/
	Total, all institutions	14,337.9	883.4	1,782.4	655.8	7,336.0	757.9	2,205.7	716.6
1	Johns Hopkins Univ 1/	729.4	0.1	353.0	7.0	284.2	60.8	13.0	11.3
2	Univ of Washington	347.5	3.7	33.9	19.4	218.8	9.0	46.3	16.4
3	Stanford University	317.9	---	35.7	8.6	154.4	72.6	41.0	5.5
4	University of Michigan	282.4	0.7	31.4	8.0	180.8	11.4	38.5	11.7
5	MA Inst of Technology	261.3	0.0	47.8	69.0	59.2	38.0	42.2	5.2
6	U CA San Diego	257.2	0.3	30.5	13.6	136.0	11.3	48.3	17.3
7	Harvard University	242.1	0.0	8.4	5.5	171.4	9.7	28.5	18.5
8	University of PA	240.8	0.3	12.9	8.3	191.6	1.0	22.4	4.2
9	U CA San Francisco	235.1	0.2	9.3	2.0	218.9	1.3	2.6	0.9
10	U WI Madison	231.1	19.4	12.2	15.9	122.4	11.0	44.8	5.5
11	Cornell University	230.7	25.0	14.5	5.1	94.2	6.0	83.3	2.5
12	U CA Los Angeles	226.7	0.3	16.9	15.8	160.1	9.1	20.8	3.5
13	University of Minnesota	220.7	19.7	13.6	6.1	133.9	2.7	34.6	10.1
14	Yale University	211.9	0.5	11.1	9.9	175.6	1.0	13.1	0.8
15	Columbia U City NY	204.7	0.1	8.5	8.3	142.3	4.8	34.9	5.9
16	Washington University	198.9	0.4	6.0	3.0	173.8	3.3	11.9	0.4
17	University of Colorado	197.4	0.2	12.8	4.6	108.6	16.5	31.0	23.8
18	CA Inst of Technology	190.7	---	26.2	9.8	24.6	25.1	103.6	1.4
19	PA St U University Park	190.2	21.9	63.8	5.2	57.4	9.4	28.0	4.5
20	U of NC Chapel Hill	181.2	0.6	8.2	1.7	146.1	0.4	11.0	13.1
	Total, top 20 institutions	5,198.0	93.5	756.9	226.7	2,954.3	304.4	699.8	162.4

KEY:--- = Less than $50,000

1/ Includes funding for the Applied Physics Laboratory.

2/ Includes Department of Interior, Department of Commerce, Office of Justice Programs (part of Department of Justice), Department of Housing and Urban Development, Agency for International Development, Department of Labor, Department of Transportation, Environmental Protection Agency, Social Security Administration, Nuclear Regulatory Commission, General Services Administration, and Department of Education.

SOURCE: NSF/SRS, Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions: FY 1996

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